

Certified Mail: 9059 7639

July 2, 2001

Kenneth F. Moses  
Plant Environmental Engineer  
Unilever Home & Personal Care - USA  
1200 Calumet Avenue  
Hammond, IN 46320-1096

Re: Minor Source Modification No: 089-13896-00229

Dear Mr. Moses:

Unilever HPC - USA applied for a Part 70 operating permit on September 18, 1996 for a soap manufacturing facility. An application to modify the source was received on October 3, 2000. Pursuant to 326 IAC 2-7-10.5(d)(6) the following emission unit is approved for modification at the source:

Powerhouse Boiler #1 - increase of the permitted maximum capacity from 96.64 mmBtu/hr to 120mmBtu/hr by reprogramming the control system and installing a larger safety valve.

The proposed Minor Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5 (l)(3). The source may begin operation upon issuance of the minor source modification approval.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (219) 853-6306 and ask for Ronald Holder or Debra Malone.

Sincerely,

Ronald L. Novak, Director  
Hammond Department of Environmental Management  
Air Pollution Control Division

Attachments

RH

cc: U.S. EPA, Region V - Cheryl Newton  
Permits Administration - Mindy Hahn

# **PART 70 MINOR SOURCE MODIFICATION**

**Indiana Department of Environmental Management  
Office of Air Quality**

and

**Hammond Department of Environmental Management  
Air Pollution Control Division**

**Unilever HPC, USA  
1200 Calumet Avenue  
Hammond, Indiana 46320**

(herein known as the Permittee) is hereby authorized to modify and operate subject to the conditions contained herein, the emission unit described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70, Appendix A, and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Minor Source Modification No.: 089-13896-00229	
Issued by:	Issuance Date: July 2, 2001
Ronald L. Novak, Director Hammond Department of Environmental Management	

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## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management Office of Air Quality (IDEM-OAQ) and Hammond Department of Environmental Management (HDEM). The information describing the source contained in Conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary soap manufacturing plant.

Responsible Official:	David B. Johnson, Plant Manager
Source Address:	1200 Calumet Avenue, Hammond, Indiana 46320
Mailing Address:	1200 Calumet Avenue, Hammond, Indiana 46320
SIC Code:	2841 - Soap and Other Detergents
County Location:	Lake
Source Location Status:	Attainment for Lead, CO and NO <sub>2</sub> , and Non-Attainment for all other criteria pollutants including ozone
Source Status:	Part 70 Permit Program Major Source under PSD and Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to modify and operate the following emission units and pollution control devices:

D.2 Powerhouse Boiler No. 1, identified as Unit No. 49, constructed in 1995 and modified in 2001, with a maximum capacity of 120 MMBtu per hour, primarily natural gas fired with No. 2 fuel oil as a standby fuel, and exhausting to Stack 1.

### A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22).

## **SECTION B                    GENERAL CONSTRUCTION CONDITIONS**

### **B.1      Permit No Defense [IC 13]**

This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

### **B.2      Definitions [326 IAC 2-7-1]**

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

### **B.3      Effective Date of the Permit [IC13-15-5-3]**

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

### **B.4      Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]**

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

### **B.5      Phase Construction Time Frame**

That pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the IDEM may revoke this approval to construct if the:

- (a)      Modification of Powerhouse Boiler #1 has not begun within eighteen (18) months from the effective date of this approval or if during the modification of Powerhouse Boiler #1, work is suspended for a continuous period of one (1) year or more.

The OAQ may extend such time upon satisfactory showing that an extension, formally requested by the Permittee is justified.

### **B.6      BACT Determination for Phase Constructions**

That pursuant to 40 CFR 52.21(j)(4), for phase construction projects, the determination of BACT shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than eighteen (18) months prior to commencement of construction of each independent phase of the project.

**SECTION C GENERAL OPERATION CONDITIONS**

**C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]**

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- (a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

**C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]**

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- (a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this approval, including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and the:

Hammond Department of Environmental Management  
Air Pollution Control Division  
5925 Calumet Avenue – Room 304  
Hammond, Indiana 46320

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ and HDEM upon request and shall be subject to review and approval by IDEM, OAQ or HDEM. IDEM, OAQ or HDEM may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

**C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]**

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(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

(b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and the:

Hammond Department of Environmental Management  
Air Pollution Control Division  
5925 Calumet Avenue – Room 304  
Hammond, Indiana 46320

Any such application should be certified by the “responsible official” as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule.

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**C.4 Opacity [326 IAC 5-1]**

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Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

**C.5 Operation of Equipment [326 IAC 2-7-6(6)]**

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Except as otherwise provided in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

**Testing Requirements [326 IAC 2-7-6(1)]**

**C.6 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]**

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(a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and the:

Hammond Department of Environmental Management  
Air Pollution Control Division  
5925 Calumet Avenue – Room 304  
Hammond, Indiana 46320

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAQ and HDEM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ or HDEM if the source submits to IDEM, OAQ or HDEM a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

### **Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

#### **C.7 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

Compliance with applicable requirements shall be documented as required by this approval. All monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and the:

Hammond Department of Environmental Management  
Air Pollution Control Division  
5925 Calumet Avenue – Room 304  
Hammond, Indiana 46320

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

### **Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

#### **C.8 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] [326 IAC 1-6]**

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- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
- (1) This condition;
  - (2) The Compliance Determination Requirements in Section D of this approval;
  - (3) The Compliance Monitoring Requirements in Section D of this approval;
  - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this approval; and
  - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this approval. CRP's shall be submitted to IDEM, OAQ or HDEM upon request and shall be subject to review and approval by IDEM, OAQ or HDEM. The CRP shall be prepared within ninety (90) days after issuance of this approval by the Permittee and maintained on site, and is comprised of:
    - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this approval; and
    - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this approval, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the approval unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
- (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the approval conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the approval, and such request has not been denied or;
  - (3) An automatic measurement was taken when the process was not operating; or
  - (4) The process has already returned to operating within "normal" parameters and no response steps are required.

- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

**C.9 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAQ shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAQ within thirty (30) days of receipt of the notice of deficiency. IDEM, OAQ reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate approval conditions may be grounds for immediate revocation of the approval to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**C.10 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]**

- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM or HDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.11 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

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- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ or HDEM representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or HDEM makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or HDEM within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;
  - (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
  - (1) Copies of all reports required by this approval;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this approval, and whether a deviation from an approval condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.12 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

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- (a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and the:

Hammond Department of Environmental Management  
Air Pollution Control Division  
5925 Calumet Avenue – Room 304  
Hammond, Indiana 46320

- (b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and HDEM on or before the date it is due.
- (c) Unless otherwise specified in this approval, any quarterly or semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period.

## SECTION D.2 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

Powerhouse Boiler No. 1, identified as Unit No. 49, constructed in 1995 and modified in 2001 to a maximum capacity of 120 MMBtu per hour, primarily natural gas fired with No. 2 fuel oil as a standby emergency fuel, and exhausting to Stack 1.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.2.1 PSD and Emission Offset Minor Limit [326 IAC 2-2 and 326 IAC 2-3]

The oil usage for Powerhouse Boiler No. 1 shall not exceed 600 thousand gallons (mgal) of No. 2 fuel oil per twelve (12) consecutive month period. This limitation is equivalent to a potential to emit twenty-five (25) tons of NO<sub>x</sub> per year when natural gas is used for the remainder of the year. Compliance with this limit makes 326 IAC 2-3 (Emission Offset) and 326 IAC 2-2 (PSD) not applicable.

#### D.2.2 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart Db]

Pursuant to 326 IAC 12 and 40 CFR 60, Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units), emissions from Powerhouse Boiler No. 1 shall not exceed the following:

- (a) Five-hundredths (0.05) pound PM per million Btu (MMBtu) heat input.
- (b) Twenty percent (20%) opacity except for one six-minute period per hour of not more than twenty-seven (27%) opacity.
- (c) Five-tenths (0.5) pound SO<sub>2</sub> per million Btu (MMBtu) heat input and 90% reduction in SO<sub>2</sub> emissions.
- (d) Two-tenths (0.20) pound NO<sub>x</sub> per million Btu (MMBtu) heat input.

Compliance with this limitation shall satisfy the PM and SO<sub>2</sub> requirements of 326 IAC 6-1 and 326 IAC 7-1.1, respectively.

#### D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities.

## Compliance Determination Requirements

### D.2.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Performance testing shall be conducted in accordance with 40 CFR 60.7 and 60.8. IDEM, OAQ may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, OAQ or HDEM, compliance with the limits specified in Conditions D.2.1 through D.2.2 shall be determined by a performance test conducted in accordance with Section C – Performance Testing.

### D.2.5 NSPS Compliance Provisions [326 IAC 12] [40 CFR 60, Subpart Db]

- (a) The PM and opacity emission limitations in Condition D.2.2 apply at all times, except during periods of startup, shutdown or malfunction.
- (b) The SO<sub>2</sub> and NO<sub>x</sub> emission limitations in Condition D.2.2 apply at all times, including periods of startup, shutdown, and malfunction.
- (c) Compliance with the SO<sub>2</sub> emission limitation and percent reduction in Condition D.2.2 shall be determined by the use of "very low sulfur oil" in accordance with 40 CFR 60.42b(j).
- (d) Compliance with the PM and opacity emission limitations in Condition D.2.2 shall be determined by the methods and procedures specified in 40 CFR 60.46b(d).
- (e) Compliance with the NO<sub>x</sub> emission limitation in Condition D.2.2 shall be determined by the methods and procedures specified in 40 CFR 60.46b(e).

### D.2.6 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7-4] [326 IAC 7-1.1-2(a)(3)]

Compliance with the sulfur dioxide emission limitations and content limitations in Condition D.2.2 shall be determined by maintaining the fuel receipts in accordance with 40 CFR 60.49b(r) to demonstrate that the oil meets the definition of "very low sulfur oil" in 40 CFR 60.41b.

## Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

### D.2.7 Visible Emissions Notations

- (a) Visible emission notations of the exhaust from Stack 1 shall be performed once per shift during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

#### D.2.8 Preventive Inspections

- (a) The following inspections shall be performed at least once every two years in accordance with the Preventive Maintenance Plan prepared in accordance with Section B - Preventive Maintenance Plan:
  - (1) Start-up and shutdown practices; and
  - (2) Spare parts availability.
- (b) Inspections shall be made whenever there is an outage of any nature lasting more than three days unless such measurements have been taken within the past twelve months.
- (c) Appropriate response steps for any discrepancies in the above list found during the inspection shall be taken in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps.

#### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.2.9 Record Keeping Requirements

- (a) To document compliance with Conditions D.2.1 and D.2.2, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the NO<sub>x</sub> and SO<sub>2</sub> emission limits established in Conditions D.2.1 and D.2.2.
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;
  - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

  - (4) Fuel supplier certifications;
  - (5) The name of the fuel supplier; and
  - (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) To document compliance with Condition D.2.1, the Permittee shall maintain monthly records of the quantity in gallons of #2 fuel oil burned.

- (c) To document compliance with Condition D.2.7, the Permittee shall maintain records of visible emission notations of the Stack 1 exhaust while combusting fuel oil.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.10 Reporting Requirements

- (a) A quarterly summary of the quantity of fuel oil burned to document compliance with Condition D.2.1 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The Permittee shall certify, on the form provided, that natural gas was fired in the boiler at all times during each quarter. Alternatively, the Permittee shall report the number of days during which an alternate fuel was burned during each quarter.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
and  
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: **Unilever HPC, USA**  
Source Address: 1200 Calumet Avenue, Hammond, Indiana 46320  
Mailing Address: 1200 Calumet Avenue, Hammond, Indiana 46320  
Part 70 Permit No.: **T089-6623-00229**

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify) \_\_\_\_\_
- Report (specify) \_\_\_\_\_
- Notification (specify) \_\_\_\_\_
- Affidavit (specify) \_\_\_\_\_
- Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
and  
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

**PART 70 OPERATING PERMIT  
QUARTERLY NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: **Unilever HPC, USA**  
Source Address: 1200 Calumet Avenue, Hammond, Indiana 46320  
Mailing Address: 1200 Calumet Avenue, Hammond, Indiana 46320  
Part 70 Permit No.: **T089-6623-00229**

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

<input type="checkbox"/> <b>Natural Gas Only</b>
<input type="checkbox"/> <b>Alternate Fuel Burned</b>
<b>From:</b> _____ <b>To:</b> _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.	
Signature:	_____
Printed Name:	_____
Title/Position:	_____
Phone:	_____
Date:	_____

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION  
 and  
 HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 Part 70 Quarterly Report**

Source Name: Unilever HPC, USA  
 Source Address: 1200 Calumet Avenue, Hammond, Indiana 46320  
 Mailing Address: 1200 Calumet Avenue, Hammond, Indiana 46320  
 Part 70 Permit No.: T089-6623-00229  
 Facility: Powerhouse Boiler #1  
 Parameter: Fuel Oil #2 Usage  
 Limit: Synthetic Minor Limitation of Fuel Oil #2 Usage for NOx emissions.  
 Total fuel oil usage shall not exceed 600,000 gallons per twelve (12) consecutive month period, rolled on a monthly basis. This limitation is equivalent to a potential to emit twenty-five (25) tons of NOx per year when natural gas is used for the remainder of the year.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on:

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION  
 and  
 HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

**PART 70 OPERATING PERMIT  
 QUARTERLY DEVIATION and COMPLIANCE MONITORING REPORT**

Source Name: **Unilever HPC, USA**  
 Source Address: 1200 Calumet Avenue, Hammond, Indiana 46320  
 Mailing Address: 1200 Calumet Avenue, Hammond, Indiana 46320  
 Part 70 Permit No.: **T089-6623-00229**

**Months:** \_\_\_\_\_ **to** \_\_\_\_\_ **Year:** \_\_\_\_\_

<p>This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<b>Permit Requirement (Specify permit condition #)</b>	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement (Specify permit condition #)</b>	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement (Specify permit condition #)</b>	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

<b>Permit Requirement (Specify permit condition #)</b>	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement (Specify permit condition #)</b>	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Form Completed By: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management  
Office of Air Quality**

and

**Hammond Department of Environmental Management  
Air Pollution Control Division**

**Technical Support Document (TSD) for a Part 70  
Minor Source Modification.**

**Source Background and Description**

Source Name:	Unilever Home & Personal Care - USA
Source Location:	1200 Calumet Avenue, Hammond, Indiana 46320-1096
County:	Lake
SIC Code:	2841 - Soap and Other Detergents
Operation Permit No.:	T 089-6623-00229
Operation Permit Issuance Date:	Title V <b>(not issued)</b>
Minor Source Modification No.:	089-13896-00229
Permit Reviewer:	Ronald Holder, HDEM

The Hammond Department of Environmental Management (HDEM) has reviewed an application from Unilever HPC, USA relating to the modification of their existing Powerhouse Boiler #1. The request seeks to increase the current maximum capacity from 96.64 mmBtu/hr to 120 mmBtu/hr. No new construction is proposed and the overall steam requirements of plant operations have not changed. The modification will be accomplished by reprogramming the control system and installing a larger safety valve.

Powerhouse Boiler #1 is not currently equipped to burn fuel oil, however, the Company submitted in their application acceptable fuel oil consumption limitations for emergency backup and will have an 18,000 gallon day tank available for fuel oil storage at the plant.

Powerhouse Boiler #1 was originally installed in 1995. Permitted fuel oil restrictions were imposed at that time to keep potential emissions of nitrogen oxides (NOx) below twenty-five (25) tons. Fuel oil use will be further restricted during this review for the same reason. The Company recognizes the fact that the change for this unit will result in a change in applicability of New Source Performance Standards (NSPS) from 40 CFR 60, Subpart Dc to Subpart Db. Pursuant to 40 CFR 60.7, Unilever has provided notification to U.S. EPA.

Although the overall potential emissions will not increase, the boiler will remain subject to NSPS. Therefore, a minor source modification will be required per 326 IAC 2-7-10.5(d)(6). The approval will be incorporated into the pending Part 70 permit pursuant to 326 IAC 2-7-10.5(l)(3).

**History**

On October 3, 2000, Unilever HPC - USA, submitted an application to the HDEM requesting to modify Powerhouse Boiler #1 at their facility in Hammond, Indiana. Unilever submitted a Part 70 permit application on September 18, 1996. The Part 70 permit T089-6623-00229 has not been issued as of the date of this review.

## Enforcement Issue

There are no enforcement actions pending.

## Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
#1	Powerhouse Boiler #1	153	7	30,000	345

## Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 3, 2000. Additional information was received on December 21, 2000.

## Emission Calculations

See Appendix A of this document for detailed emissions calculations (four (4) pages).

## Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	5.64
PM-10	5.64
SO <sub>2</sub>	4.43
VOC	3.98
CO	35.23
NO <sub>x</sub>	24.99

## Justification for Modification

The Part 70 Operating permit is being modified through Part 70 Minor Source Modification 089-13896-00229. This modification is being performed pursuant to 326 IAC 2-7-10.5(d)(6), a modification that is subject to a new source performance standard (NSPS) and the NSPS is the most stringent applicable requirement.

## County Attainment Status

The source is located in Lake County.

### 40 CFR 81.315 – (Indiana) – 7/1/99

Pollutant	Status
PM-10	moderate non-attainment
SO <sub>2</sub>	primary non-attainment
NO <sub>x</sub>	attainment*
Ozone*	severe non-attainment
CO	attainment
Lead	attainment

\*Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as severe non-attainment for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. Lake County has also been designated as attainment for NO<sub>x</sub> as a lone pollutant. Therefore, NO<sub>x</sub> emissions were also reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Lake County has been classified as moderate non-attainment for particulates less than ten (10) microns in diameter (PM<sub>10</sub>). Therefore, these emissions were also reviewed pursuant to the requirements for PSD and Emission Offset.

## Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	82.48
PM-10	45.39
SO <sub>2</sub>	810.74
VOC	5.38
CO	57.62
NO <sub>x</sub>	313.08

This existing source is a major stationary source for the purposes of Emission Offset because it is in a severe ozone non-attainment area and has the potential to emit twenty-five (25) tons per year or more of oxides of nitrogen.

This source is also a major stationary PSD source for oxides of nitrogen because it is in an attainment area for oxides of nitrogen and has potential emissions of two hundred fifty (250) tons per year or more of oxides of nitrogen.

These emissions are based on the Unilever's 1999 emissions statement.

### Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

Powerhouse Boiler #1	Potential to Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	Lead
Future Potential	26.3	26.3	51.9	2.5	35.8	76.2	0.0152
Past Actual (98/99 ave)	1.2	1.2	0.1	1.2	10.6	6.2	0.0001
Net Increases (last 5 yr)	0	0	0	0	0	0	0
Net Increases	25.1	25.1	51.8	1.3	25.2	70.0	0.0151
Limited Potential	5.6	5.6	4.4	4.0	35.2	25.0	0.0014
PSD and Emission Offset Significant Net Emissions Increase Levels	25	15	40	25*	100	25*	0.6

\*de minimus for VOC and NO<sub>x</sub> in Lake County, severe nonattainment, 326 IAC 2-3-1(j).

This modification to an existing major stationary source is not major because the federally enforceable potential emissions are less than the PSD and Emission Offset significant levels. Therefore, pursuant to 326 IAC 2-2 and 326 IAC 2-3, PSD and Emission Offset requirements do not apply.

Potential emissions of oxides of nitrogen (NO<sub>x</sub>) are limited to less than twenty-five (25) tons per year, therefore, per 326 IAC 2-3-1(q)(2), the unit by itself is not a major stationary source for the purposes of Emission Offset. This limit is equivalent to seven hundred (700) hours at the maximum rate or 600,000 gallons of fuel oil combustion if natural gas is fired the remaining hours of the year. This is the maximum number of fuel oil gallons that will keep the potential of NO<sub>x</sub> emissions below twenty-five (25) tons per year (see calculations Appendix A). This limitation was acceptable and requested in the application submitted by the Company.

### Federal Rule Applicability

Powerhouse Boiler #1, previously subject to New Source Performance Standards (NSPS) 40 CFR 60.40c, Subpart Dc, for steam generating units less than 100 mmBtu/hr, will now be subject to 40 CFR 60.40b, Subpart Db, for steam generating units greater than 100 mmBtu/hr. This is a modification according to the definition in the Code of Federal Regulations, 40 CFR 60, because their will be an increase of actual hourly emissions.

This Industrial Steam Generating Unit is subject to the New Source Performance Standard 326 IAC 12, 40 CFR 60.42b through 60.44b, Subpart Db. This rule requires that the emissions from Boiler #1 shall not exceed the following:

- (a) Five-hundredths (0.05) pound PM per million Btu (MMBtu) heat input.
- (b) Twenty percent (20%) opacity except for one six-minute period per hour of not more than twenty-seven (27%) opacity.
- (c) Five-tenths (0.5) pound SO<sub>2</sub> per million Btu (MMBtu) heat input and 90% reduction in SO<sub>2</sub> emissions.
- (d) Two-tenths (0.20) pound NO<sub>x</sub> per million Btu (MMBtu) heat input.

There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

### **State Rule Applicability - Individual Facilities**

Compliance with the above Federal limitations will satisfy the PM and SO<sub>2</sub> requirements of 326 IAC 6-1 and 326 IAC 7-1.1, respectively.

### **Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

### **Powerhouse Boiler #1 will have the following Compliance determination requirements:**

#### NSPS Compliance Provisions [40 CFR 60, Subpart Db]

- (a) The PM and opacity emission limitations will apply at all times, except during periods of startup, shutdown, or malfunction.
- (b) The SO<sub>2</sub> and NO<sub>x</sub> emission limitations will apply at all times, including periods of startup, shutdown, and malfunction.
- (c) Compliance with the SO<sub>2</sub> emission limitation and percent reduction will be determined by the use of "very low sulfur oil" in accordance 40 CFR 60.42b(j).
- (d) Compliance with the PM and opacity emission limitations shall be determined by the methods and procedures specified in 40 CFR 60.46b(d).
- (e) Compliance with the NO<sub>x</sub> emission limitation shall be determined by the methods and procedures specified in 40 CFR 60.46b(e).

#### Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7-4] [326 IAC 7-1.1-2(a)(3)]

Compliance with the sulfur dioxide emission limitations and content limitations will be determined by maintaining the fuel receipts as described in 40 CFR 60.49b(r) to demonstrate that the oil meets the definition of "very low sulfur oil".

**Powerhouse Boiler #1 will have the following Compliance monitoring requirements:**

Visible Emissions Notations

- (a) Visible emissions notations of the exhaust from Stack 1 shall be performed once per shift during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Record Keeping Requirements

- (a) To document compliance with the sulfur dioxide emission and content limitations, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO<sub>2</sub> emission limit and SO<sub>2</sub> content limitations.
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;
  - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas-fired boiler certification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34); and

If the fuel supplier certification is used to demonstrate compliance, the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications;
  - (5) The name of the fuel supplier; and
  - (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) To document compliance with fuel oil use limitations, the Permittee shall maintain daily records of the quantity in gallons of #2 fuel oil burned.
- (c) To document compliance with visible emissions notations, the Permittee shall maintain records of visible emissions notations of Stack 1 exhaust while combusting fuel oil.
- (d) All records will be maintained in accordance with Section C – General Record Keeping Requirements, of the permit.

### Reporting Requirements

- (a) A quarterly summary of the quantity of fuel oil consumed to document compliance with the annual fuel oil use limitations will be submitted to the addresses listed in Section C - General Reporting Requirements, of the permit, using the reporting forms located at the end of the permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee will require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The Permittee will certify, on a form provided, that natural gas was fired in the boiler at all times during each quarter. Alternatively, the Permittee shall report the number of days during which an alternate fuel was burned during each quarter.

These monitoring conditions are necessary to demonstrate compliance with applicable state and federal rules on a more or less continuous basis.

### **Conclusion**

This proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification Permit (089-13896-00229).

**Unilever HPC, USA**  
 1200 CALUMET AVENUE  
 HAMMOND, IN 46320

**Appendix A: Powerhouse Boiler #1 Future Potential to Emit**

PLANT ID NO: 089-00229  
 INSP DATE: 9/27/00  
 CALC DATE: 3/29/01

NO. OF POINTS: 1  
 NO. OF SEGMENTS: 2

CALCULATIONS BY: Ronald Holder

**Page 1**

\*\*NOTES\*\*

EF: EMISSION FACTOR  
 CE: CONTROL EFFICIENCY  
 MDR: MAXIMUM DESIGN RATE  
 MDC: MAXIMUM DESIGN CAPACITY  
 Ts: STACK DISCHARGE TEMPERATURE  
 UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

P49; S1: POWERHOUSE BOILER #1  
 (Natural Gas Combustion)  
 Shares stack 1 with Boiler #2, Bldg. 8  
 MDC (mmBtu/hr): 120  
 MDR (mmcf/hr): 0.1143  
 HEAT CONTENT (Btu/cft): 1,050  
 QTY BURNED (mmcf/yr): N/A  
 STACK ID (DIAM:HEIGHT): 7' : 153'  
 FLOWRATE (ACFM): 30,149  
 Ts(°F): 345

CNTRL DEV: FLUE GAS RECIRCULATION & LOW NOx BURNERS  
 PERMITTED OPERATING HRS: 8760 hr/yr  
 SCC NO. 1-02-006-02

POLLUTANT	EF(lbs/mmcf)	CE (%)	BEFORE CONTROL			AFTER CONTROL		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	7.695	0	0.879	21.106	3.852	0.879	3.852	N/A
PM10	7.695	0	0.879	21.106	3.852	0.879	3.852	N/A
SOx	0.6156	0	0.070	1.689	0.308	0.070	0.308	N/A
NOx	41.04	0	4.690	112.567	20.543	4.690	20.543	N/A
VOC	8.208	0	0.938	22.513	4.109	0.938	4.109	N/A
CO	70.2663	0	8.030	192.730	35.173	8.030	35.173	N/A
LEAD	0.0005	0	0.0001	0.0014	0.0003	0.0001	0.0003	N/A

EFs modified upon company request and in accordance with EPA bulletin board (original review)

P49; S2: POWERHOUSE BOILER #1  
 (No. 2 Fuel Oil Combustion)  
 Stack 1, Bldg. 8  
 MDC (mmBtu/hr): 120  
 MDR (mgal/hr): 0.8696  
 HEAT CONTENT (Btu/gal): 138,000  
 ASH CONTENT (%): 0.01  
 QTY BURNED (mgal/yr): N/A  
 SULFUR CONTENT (%): 0.096  
 STACK ID (DIAM:HEIGHT): 7' : 153'  
 FLOWRATE (ACFM): 29,494  
 Ts(°F): 345

CNTRL DEV: NONE  
 PERMITTED OPERATING HRS: 8760 hr/yr  
 SCC NO. 1-02-005-01

POLLUTANT	EF(lbs/mgal)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	6.9	0	6.000	144.000	26.280	6.000	26.280	N/A
PM10	6.9	0	6.000	144.000	26.280	6.000	26.280	N/A
SOx	13.632	0	11.854	284.494	51.920	11.854	51.920	N/A
NOx	20	0	17.391	417.391	76.174	17.391	76.174	N/A
VOC	0.662	0	0.576	13.816	2.521	0.576	2.521	N/A
CO	9.408	0	8.181	196.341	35.832	8.181	35.832	N/A
LEAD	0.004	0	0.0035	0.0835	0.0152	0.0035	0.0152	N/A

**Future Potential Emissions**

POLLUTANT	(TPY)
PM	26.28
PM10	26.28
SOx	51.92
NOx	76.17
VOC	2.52
CO	35.83
LEAD	0.0152

based on #2 oil @ 8760

**Appendix A: Powerhouse Boiler #1 Past Actual Emissions (average 1998/1999)**

PLANT ID NO: 089-00229  
 INSP DATE: 9/27/00  
 CALC DATE: 3/28/01  
 NO. OF POINTS: 1  
 NO. OF SEGMENTS: 2

CALCULATIONS BY: Ronald Holder (average 1998/1999)

**\*\*NOTES\*\***

EF: EMISSION FACTOR  
 CE: CONTROL EFFICIENCY  
 MDR: MAXIMUM DESIGN RATE  
 MDC: MAXIMUM DESIGN CAPACITY  
 Ts: STACK DISCHARGE TEMPERATURE  
 UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

P49; S1: POWERHOUSE BOILER #1  
 (Natural Gas Combustion)  
 Shares stack 1 with Boiler #2, Bldg. 8  
 MDC (mmBtu/hr): 97.48  
 MDR (mmcf/hr): 0.0950  
 HEAT CONTENT (Btu/cft): 1,050  
 QTY BURNED (mmcf/yr): 301.00  
 STACK ID (DIAM:HEIGHT): 7' : 153'  
 FLOWRATE (ACFM): 30,149  
 Ts(°F): 345

CNTRL DEV: FLUE GAS RECIRCULATION & LOW NOx BURNERS

PERMITTED OPERATING HRS: 7235 hr/yr

POLLUTANT	EF(lbs/mmcf)	CE (%)	POTENTIAL EMISSIONS						ACTUAL EMISSIONS	
			BEFORE CONTROL			AFTER CONTROL			Average 1998 and 1999	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	7.695	0	0.731	17.545	2.644	0.731	2.644	N/A	N/A	1.158
PM10	7.695	0	0.731	17.545	2.644	0.731	2.644	N/A	N/A	1.158
SOx	0.6156	0	0.058	1.404	0.212	0.058	0.212	N/A	N/A	0.093
NOx	41.04	0	3.899	93.571	14.104	3.899	14.104	N/A	N/A	6.177
VOC	8.208	0	0.780	18.714	2.821	0.780	2.821	N/A	N/A	1.235
CO	70.2663	0	6.675	160.207	24.148	6.675	24.148	N/A	N/A	10.575
LEAD	0.0005	0	0.000	0.001	0.000	0.000	0.000	N/A	N/A	0.0001

1998 (276 mmcf)  
 1999 (326 mmcf)  
 average (301 mmcf)

EFs modified upon company request and in accordance with EPA bulletin board (original review)

P49; S2: POWERHOUSE BOILER #1  
 (No. 2 Fuel Oil Combustion)  
 Stack 1, Bldg. 8  
 MDC (mmBtu/hr): 95.8  
 MDR (mgal/hr): 0.6942  
 QTY BURNED (mgal/yr): 0.00  
 HEAT CONTENT (Btu/gal): 138,000  
 ASH CONTENT (%): 0.01  
 SULFUR CONTENT (%): 0.096  
 STACK ID (DIAM:HEIGHT): 7' : 153'  
 FLOWRATE (ACFM): 29,494  
 Ts(°F): 345

CNTRL DEV: NONE

PERMITTED OPERATING HRS: 1525 hr/yr

POLLUTANT	EF(lbs/mgal)	CE (%)	POTENTIAL EMISSIONS						ACTUAL EMISSIONS	
			BEFORE CONTROLS			AFTER CONTROLS			Average 1998 and 1999	
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	6.9	0	4.790	114.960	3.652	4.790	3.652	N/A	N/A	0.00
PM10	6.9	0	4.790	114.960	3.652	4.790	3.652	N/A	N/A	0.00
SOx	13.632	0	9.463	227.120	7.216	9.463	7.216	N/A	N/A	0.00
NOx	20	0	13.884	333.216	10.587	13.884	10.587	N/A	N/A	0.00
VOC	0.662	0	0.460	11.029	0.350	0.460	0.350	N/A	N/A	0.00
CO	9.408	0	6.531	156.745	4.980	6.531	4.980	N/A	N/A	0.00
LEAD	0.004	0	0.003	0.067	0.002	0.003	0.002	N/A	N/A	0.00

no fuel oil used in 1998 or 1999  
 fuel oil capability has not been installed

**Totals for Powerhouse Boiler #1**

POLLUTANT	POTENTIAL EMISSIONS						ACTUAL EMISSIONS		Totals POLLUTANT
	BEFORE CONTROLS			AFTER CONTROLS			Average 1998 and 1999		
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	
PM	N/A	N/A	6.297	N/A	6.297	N/A	N/A	1.16	PM
PM10	N/A	N/A	6.297	N/A	6.297	N/A	N/A	1.16	PM10
SOx	N/A	N/A	7.427	N/A	7.427	N/A	N/A	0.09	SOx
NOx	N/A	N/A	24.690	N/A	24.690	N/A	N/A	6.18	NOx
VOC	N/A	N/A	3.171	N/A	3.171	N/A	N/A	1.24	VOC
CO	N/A	N/A	29.128	N/A	29.128	N/A	N/A	10.58	CO
LEAD	N/A	N/A	0.002	N/A	0.002	N/A	N/A	0.0001	LEAD

Natural gas and #2 fuel oil are not used simultaneously, therefore, instantaneous rates lbs/hr and lbs/day are not added, choose worst case.

This is the potential to emit from the limited hours of fuel use and remaining hours of natural gas use that results in total less than 25 TPY NOx, from original review 1995.

Applicable Reg: SO2: 40 CFR 60 Subpart Dc - 0.5 lbs/MMBtu  
 Criteria Pollutants: Hammond Air Quality Control Ordinance No. 3522 (as amended) allowable under local, potential emissions after controls.

**Appendix A: Powerhouse Boiler #1 Limited Potential to Emit**

PLANT ID NO: 089-00229  
 INSP DATE: 9/27/00  
 CALC DATE: 3/29/01

NO. OF POINTS: 1  
 NO. OF SEGMENTS: 2

CALCULATIONS BY: Ronald Holder

\*\*NOTES\*\*

EF: EMISSION FACTOR  
 CE: CONTROL EFFICIENCY  
 MDR: MAXIMUM DESIGN RATE  
 MDC: MAXIMUM DESIGN CAPACITY  
 Ts: STACK DISCHARGE TEMPERATURE  
 UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

P49; S1: POWERHOUSE BOILER #1  
 (Natural Gas Combustion)  
 Shares stack 1 with Boiler #2, Bldg. 8  
 MDC (mmBtu/hr): 120  
 MDR (mmcf/hr): 0.1143  
 HEAT CONTENT (Btu/cft): 1,050  
 QTY BURNED (mmcf/yr): N/A  
 STACK ID (DIAM:HEIGHT): 7' : 153'  
 FLOWRATE (ACFM): 30,149  
 Ts(°F): 345

CNTRL DEV: FLUE GAS RECIRCULATION & LOW NOx BURNERS

PERMITTED OPERATING HRS: 8060 hr/yr

POLLUTANT	EF(lbs/mmcf)	CE (%)	BEFORE CONTROL			AFTER CONTROL		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	7.695	0	0.879	21.106	3.544	0.879	3.544	N/A
PM10	7.695	0	0.879	21.106	3.544	0.879	3.544	N/A
SOx	0.6156	0	0.070	1.689	0.284	0.070	0.284	N/A
NOx	41.04	0	4.690	112.567	18.902	4.690	18.902	N/A
VOC	8.208	0	0.938	22.513	3.780	0.938	3.780	N/A
CO	70.2663	0	8.030	192.730	32.363	8.030	32.363	N/A
LEAD	0.0005	0	0.0001	0.0014	0.0002	0.0001	0.0002	N/A

EFs modified upon company request and in accordance with EPA bulletin board (original review)

P49; S2: POWERHOUSE BOILER #1  
 (No. 2 Fuel Oil Combustion)  
 Stack 1, Bldg. 8  
 MDC (mmBtu/hr): 120  
 MDR (mgal/hr): 0.8696  
 HEAT CONTENT (Btu/gal): 138,000  
 ASH CONTENT (%): 0.01  
 QTY BURNED (mgal/yr): N/A  
 SULFUR CONTENT (%): 0.096  
 STACK ID (DIAM:HEIGHT): 7' : 153'  
 FLOWRATE (ACFM): 29,494  
 Ts(°F): 345

CNTRL DEV: NONE

PERMITTED OPERATING HRS: 700 hr/yr

POLLUTANT	EF(lbs/mgal)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	6.9	0	6.000	144.000	2.100	6.000	2.100	N/A
PM10	6.9	0	6.000	144.000	2.100	6.000	2.100	N/A
SOx	13.632	0	11.854	284.494	4.149	11.854	4.149	N/A
NOx	20	0	17.391	417.391	6.087	17.391	6.087	N/A
VOC	0.662	0	0.576	13.816	0.201	0.576	0.201	N/A
CO	9.408	0	8.181	196.341	2.863	8.181	2.863	N/A
LEAD	0.004	0	0.0035	0.0835	0.0012	0.0035	0.0012	N/A

max rate of 0.8696 mgal/hr  
 for 700 hours  
 equals 608720 max gallons of #2 fuel oil per year

Potential for 700 hours fuel oil #2  
 equivalent to 600,000 gallons  
 emergency backup fuel option requested  
fuel oil capability has not been installed.

**Totals for Powerhouse Boiler #1**

POLLUTANT	BEFORE CONTROLS			AFTER CONTROLS		
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	N/A	N/A	5.644	N/A	5.644	N/A
PM10	N/A	N/A	5.644	N/A	5.644	N/A
SOx	N/A	N/A	4.432	N/A	4.432	N/A
NOx	N/A	N/A	24.989	N/A	24.989	N/A
VOC	N/A	N/A	3.982	N/A	3.982	N/A
CO	N/A	N/A	35.226	N/A	35.226	N/A
LEAD	N/A	N/A	0.0012	N/A	0.0014	N/A

Natural gas and #2 fuel oil are not used simultaneously, therefore, instantaneous rates lbs/hr and lbs/day are not added, choose worst case.

This is the potential to emit from the limited gallons of fuel oil use and remaining hours of natural gas use that results in total less than 25 TPY NOx.

**Limitation: 600,000 gallons #2 Oil**

Applicable Reg:  
 40 CFR 60, Subpart Db

PM = 0.05 lbs per MMBtu  
 SO2 = 0.5 lbs per MMBtu/hr (VLSO)  
 NOx = 0.2 lbs per MMBtu/hr

Limited Potential Emissions		
POLLUTANT	(TPY)	
PM	5.64	
PM10	5.64	
SOx	4.43	
NOx	24.99	
VOC	3.98	
CO	35.23	
LEAD	0.0014	

# Unilever Powerhouse E

Appendix A

## Past Actual vs. Future Potential to Emit

Page 4

Future Potential Emissions (8760 #2 Oil)  
 Past Actual Emissions (average 1998/1999)  
 Future Potential minus Past Actual (increase)  
 Limited Potential (NOx - 25 TPY)  
 Significant Net Emissions Increase Levels  
 PSD (326 IAC 2-2) and Emission Offset (326 IAC 2-3)

	PM	PM10	SO2	VOC	CO	NOx	
Future Potential Emissions	26.3	26.3	51.9	2.5	35.8	76.2	see page 1
Past Actual Emissions	1.2	1.2	0.1	1.2	10.6	6.2	see page 2
Future Potential minus Past Actual	25.1	25.1	51.8	1.3	25.2	70.0	
Limited Potential	5.6	5.6	4.4	4.0	35.2	25.0	see page 3
Significant Net Emissions Increase Levels	25	15	40	25*	100	25*	

\*de minimus for VOC and NOx in Lake County severe ozone nonattainment, 326 IAC 2-3-1(j)